



Natural Resource Irregular News

A Busy Summer of Research and Monitoring

New inventory and monitoring projects have begun. The NPS Northeast Coastal and Barrier Network (CBN) program funds them. (To learn more about the CBN that Colonial NHP is part of visit www.nature.nps.gov/im/units/nw10.)

The College of William and Mary, Biology Department Herbarium, under former intern, and now the College's herbarium director, Holly Grubbs just completed entering 1000's of flora and fauna species observations from the park into the NPS nationwide NPSpecies database. The College of William and Mary's Center for Conservation Biology is conducting a parkwide avian survey. They are also working with us in setting up a long-term monitoring and research program of our bald eagle nests.

The Virginia Department of Conservation and Recreation, Division of Natural Heritage is currently working on the development of a management plan for the seasonal depressional ponds in Yorktown, development of digital vegetation datasets based on the National Vegetation Classification System (adopted by the US Government), and a parkwide survey for odonates and diurnal lepidoptera (dragonflies, damselflies, butterflies, skippers). Previous work by the Division has identified over 60 species. Last year they discovered a globally rare skipper (see photo on right side). North Carolina State Universities, NPS Field Technical Support Center for GIS, conducted the initial preparation of digital photographs and delineation for the above National Vegetation Classification work.

The U.S. Geological Survey, (USGS) Biological Resource Division (BRD) will be conducting a monitoring project of the estuarine (salt marsh) wetland environment of the park on nutrient enrichment and impacts. The University of Rhode Island, Coastal Institute will conduct a monitoring project on wetland vegetation and nektons (*marine and freshwater organisms that can swim freely, ranging in size from fish to microscopic organisms*). Both of these projects are part of the development of a protocol to be used by all of the CBN parks for long-term environmental monitoring of

Welcome to our summer interns

Molly Rogerro is a MS candidate at VIMS. She is joining us as a summer intern working on the wetland and nutrient studies being conducted by University of Rhode Island and USGS-Biological Resource Division. Molly has a BS from the College of William and Mary in Environmental Science with honors. She has worked as a biological technician with the USFWS, and conducted research on wetlands, watershed and water quality and off-road vehicle impacts at North Carolina beaches. She has also taught classes related to ecotourism. She recently conducted a wetland delineation for the park at Green Springs. She is experienced in GIS, GPS, webdesign, and statistical analysis. Her husband is getting his master's degree from the College of William and Mary.

Mark Lehman before coming to the park last December as a volunteer in GIS spent 8 years in the database management and design business working for a national company. A native of Pennsylvania he has a BA and MS in information science from the University of Pittsburgh. During the summer of 2002 desiring a change in jobs Mark completed the GIS certificate program at the University of California at Riverside. He has been invaluable in developing several new hydrological datasets, assisting with database design, GPS work and expanding our digital photography library (see some of the results on page 4). Starting in late August 2003 he will enter the MS program in environmental science at Indiana University. Starting in June Mark will be hired under the Student Temporary Employment Program to continue working on GIS projects.

salt marshes.

Frostburg State University continues the parkwide small mammal survey. Graduate students Dana and Heather are living in the dorm this summer (see page 4 for their photos).

Park fee monies are funding a hydrological survey of Green Springs by the USGS. Hydrologist Gary Speiran is conducting the study. Also, VIMS will hopefully be working on an endangered species recovery project involving enhancing the sensitive joint vetch habitat (see photo on right side).



Mark Lehman



Molly Rogerro



Sensitive Joint Vetch



Rare Skipper



Short Bites

The geographic information system program (GIS) has completed the GPS (global position system) monitoring of the Yorktown Onion. This is the first time in over six years. Many thanks to volunteers Mark Lehman and Ron Lippert.

Ron has also been busy with the GPS unit inventorying park signs. He's walked a lot of miles and has many more to go. Ron is a retired engineer from Lockheed Martin that also volunteers at the Jamestown Yorktown Foundation as an information technology specialist.

Planning has been on going since last November to develop a long-term monitoring program for the Jamestown 400 project area as required under the Final Record of Decision for the Environmental Impact Statement. We are working with multiple cooperators including NPS-Water, Geological and Biological Resource Divisions; USGS Water and Biological Resource Divisions, VIMS, William and Mary's Center for Conservation Biology, North Atlantic Cooperative Education Science Unit at the University of Rhode Island, Virginia Division of Natural Heritage, US Fish and Wildlife Service and the NPS Northeast Coastal and Barrier Network.

We expect to soon receive the final report on the parkwide herps (amphibians and reptiles) survey conducted by Dr. Joe Mitchell.

Mark Lehman has been putting his professional photography training to good use expanding our natural resource digital



Volunteer Ron Lippert

photo library (see some of the results on page four).

The park has just received new parkwide digital, infrared aerial photographs. These photographs are being used to develop the GIS based National Vegetation Classification system. They were taken during fall 2002 (leaf off) and spring 2003 (leaf on).

Priority invasive vegetation for treatment and control in the park by the newly formed NPS Mid-Atlantic Exotic Pest Management Team include Princess tree, tree of heaven, bamboo, privet, Japanese knotweed, Oriental bittersweet, Chinese wisteria, phragmites, English ivy, Japanese honeysuckle, multiflora rose, mimosa, wineberry, barberry, gill-over-the-ground, Canadian thistle. The team is stationed at Shenandoah NP. Another team has been funded for the middle part of the Northeast Region and is stationed

at Delaware Water Gap NRA. Last year the two major priorities were phragmites, kudzu, bamboo and the woodlots in the village of Yorktown.

Five of our six bald eagle nest produced eaglets this year. Mother, father and eaglet are all doing fine. Special thanks to Kirk Kehrberg, Larry Thrower and Henry Campbell for monitoring eagle activity at Jamestown Island and along the Parkway at Jamestown.

We have a canoe now for use by our different researchers. It was funded through the NPS NE Coastal and Barrier Network program.

For more information on the park's natural resources, science program, research and inventory and monitoring reports and plans, photo gallery and GIS data visit the park website at www.nps.gov/colo/nature.



Bald Eagle and nest

Some of the Research and Science Permits for Colonial NHP

<i>Primary Investigator</i>	<i>Organization</i>	<i>Title of Project</i>	<i>Co-investigator</i>
William Apperson, Va. Dept of Forestry,		Collection of warm season grasses for nursery productions, Switchgrass, Panicum virgatum	
William Apperson, Va. Dept. of Forestry,		Establish Long Leaf Pine Plots	
Ronald Barry, Frostburg State Univ.		Conduct Small Mammal Survey, Ms. Dana Strang, Ms. Heather Warchalowski, Ms. Tressa Dolbeare	
Dana Bradshaw, College of William and Mary,		Center for Conservation Biology, Inventory of Avian Species. Bart Paxton, Bryan Watts, Catherine Markham, Mathew O'Donnell, Mathew Smith, Nathan Foster	
Anne Chazal, VA. DCR, Division of Natural Heritage,		Inventory of Odonata and Diurnal Lepidoptera, Steve Roble, Chris Hobson, Kim Cousins	
Sandra Erdle, Rick Myers, VA. DCR, Division of Natural Heritage,		Management Plan for the Sinkholes of Yorktown Battlefield	
Kirk Havens, Va. Institute of Marine Science,		Initiating Development of a Forested Headwater Wetland HGM Model for Wetlands Management in Virginia. David L. O'Brien	
Mary-Jane James-Pirri, University of Rhode Island,		Coastal Institute, Implementing Long-Term Monitoring of Salt Marsh Communities, Ryan Tainsh	
Karen Patterson, VA. DCR, Division of Natural Heritage,		Vegetation Mapping at Seven Mid-Atlantic Parks, Colonial NHP. Dean Walton, Gary Fleming, Gina Pisoni	
Jim Rindfleisch, York County,		Mosquito control survey for potential breeding habitats and monitoring for mosquito nuisance and vector diseases (WNV, EEE) in the Yorktown unit. Charles Ferrell, Clemment Morrissey	
Gary Speiran, USGS, WRD,		Baseline Hydrologic Study of the Green Spring	
Hilary Neckles, USGS, BRD,		Monitoring for nutrient variables and impacts in salt marshes. Ryan Tainsh	

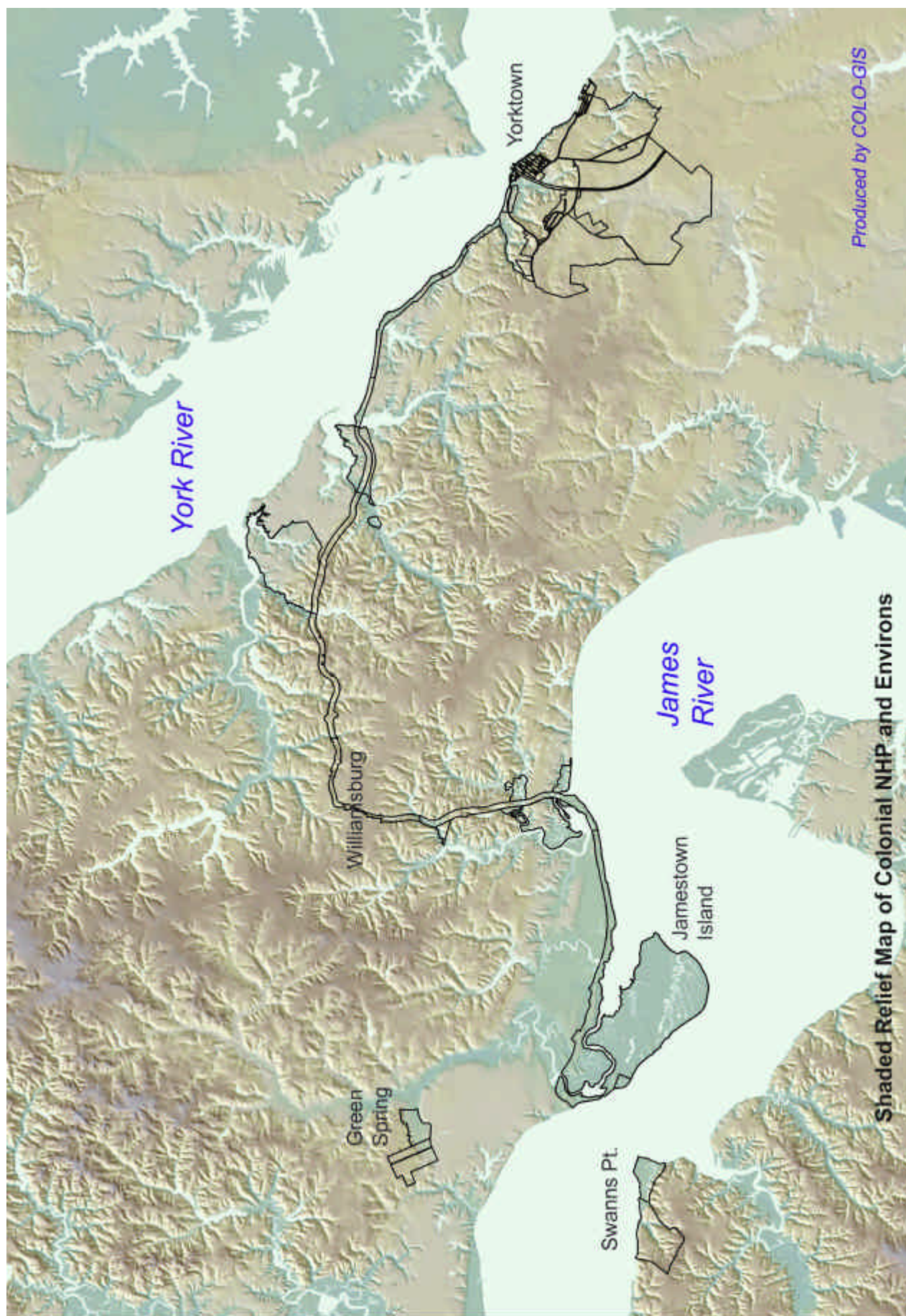
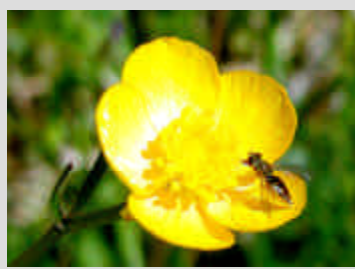
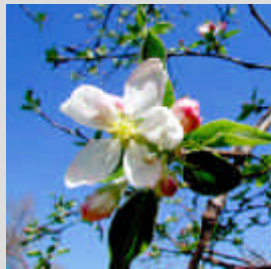
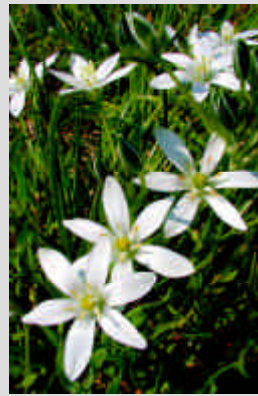
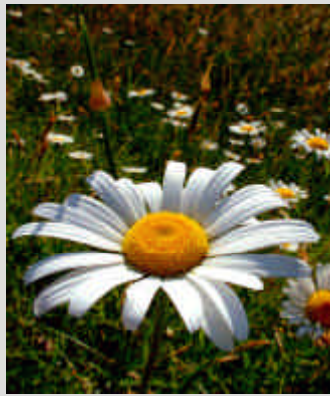


Photo Gallery of Yorktown Battlefield and Colonial Parkway by *Mark Lehman*



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Park website
www.nps.gov/colo/nature

Network website
www.nature.nps.gov/im/units/nw10

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EXPERIENCE YOUR AMERICA



Dana Strang



Heather Warcholowski

**Graduate student researchers for the
small mammal inventory of the park
from Frostburg State University**